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ABSTRACT

Studies of sex roles and their relationship to behavioral and personality variables have abounded since Bem published her original theory of androgyny (1974). To examine different kinds of sex roles, 256 college students (191 females, 65 males), with a median age of 18.4 years, completed the Activities Inventory. The Inventory is based on self-perceptions of the frequency of everyday behaviors rather than on endorsement of descriptive traits. Subjects also completed the Spence-Helmreich-Stapp Personal Attributes Questionnaire and the Attitude Toward Women Scale to correlate item endorsement with several different criteria for sex typing (sex, instrumental or expressive sex role, and traditional/liberal attitude toward women). A factor analysis of the Activities Inventory revealed five factors for women (the number of men was too small for factor analysis): Feminine Leisure Activities, Relating to Significant Other, Masculine Activities, Religiosity, and Home Care. Based on the relation of factors to other variables, it was concluded that all except religiosity represented behavior roles that can be called sex roles. Additional research should focus on developing the factors for a larger group of men, and prediction of other criteria of interest to sex role researchers. (Author/BL)

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A SEX ROLES INSTRUMENT BASED ON EVERYDAY ACTIVITIES

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A Sex Roles Instrument Based on Everyday Activities

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Abstract

Like other sex roles measures, the Activities Inventory is based on self-perceptions; however, it is based on perceived frequencies of everyday behaviors rather than endorsement of descriptive traits. A large number of behaviors were rated by college students (examples: "baking," "banking," "mowing the lawn"). The Spence-Helmreich-Stapp Personal Attributes Questionnaire and Attitude Toward Women Scale were also administered so that item endorsement could be correlated with several different criteria for sex typing: (a) sex, (b) instrumental or expressive sex role, and (c) traditional/liberal attitude toward women. Factor analysis of the Activities Inventory revealed five factors for women (the number of men was too small for factor analysis): Feminine Leisure Activities, Relating to Significant Other, Masculine Activities, Religiosity, and Home Care. Based on the relations of factors to other variables, it was concluded that all except religiosity represent behavior roles that can be called sex roles.

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A Sex Roles Instrument
Based on Everyday Activities

Studies of sex roles and their relations to behavioral and personality variables have abounded since Bem published her original theory of androgyny (Bem, 1974). Both the Bem Sex Roles Inventory (BSRI; Bem, 1974) and the Personal Attributes Questionnaire (PAQ) of Spence, Helmreich, and Stapp (1974, 1975) have been widely used as measures of instrumental (associated with masculinity) and expressive (associated with femininity) traits. According to Spence and Helmreich, instrumental attributes are socially desirable self-assertive attributes, such as "independent, active, and self-confident" (1980, p. 150). Expressive attributes are interpersonal qualities, also considered socially desirable, such as showing kindness and awareness of others' feelings. Despite the great interest in research using these measures, however, Spence and Helmreich stated that they have "only minimal construct validity, as sex roles measures" (1980, p. 157), and that the narrower definition as measures of instrumentality and expressiveness, rather than global constructs of masculintity and femininity, are to be preferred. They further cautioned that "the evidence obtained with the PAQ and BSRI suggests that sex-role behaviors and preferences are often minimally related to instrumental and expressive dimensions" (p. 157).

There is still much work to do both in understanding the importance of instrumentality and expressiveness in sex roles theory, including the ways that these traits interact with social

role expectations in different situations, and in uncovering and measuring different kinds of sex roles. This paper is concerned with the latter task. An Activities Inventory was constructed based on the everyday behaviors in which college students might be expected to engage. The Activities Inventory is therefore behaviorally based, rather than a measure of self-reported attributes or trait descriptions. A large number of items (158) were generated by psychology students. Students who participated as subjects were asked to check items or leave them blank, depending upon their perceived frequency of each activity. Participants were asked to judge for themselves whether or not they frequently engaged in an activity, hence the Activities Inventory is based on self-perceptions of behavior frequencies rather than on any objectively defined criteria.

The Spence, Helmreich, and Stapp (1973) Attitude Toward Women Scale (AWS) and the PAQ were also administered. In this way, items could be ordered in terms of several different criteria for sex typing: (a) biological sex, (b) the sex role attributes: instrumentality and expressiveness, and (c) traditional versus liberal attitude toward the roles of women.

In addition, factor analyses within sex were planned. The purpose was to see if patterns of behavior would emerge which, taken together, would define behavioral roles which are potentially sex roles, depending on (a) whether different kinds of factors emerged for the two sexes, and (b) whether these factors predicted differentially for the sexes on measures related to sex and sex roles.

Method

Subjects and Procedures

Participants were students enrolled in first-year psychology courses at California State University, Northridge. An optional course requirement was fulfilled by participating. There were 191 women and 65 men; 69.5% were White non-Hispanic, 9.0% were Asian, 7.8% were Hispanic, 7.0% were Black, and 6.7% described their ethnicity as "other." The median age was 18.4. Almost all (98.0%) were single.

Scale Construction

Items were based on everyday behaviors (e.g., "baking," "banking," "hugging (children)," "playing basketball," "snacking". Descriptions were kept as short and as simple as possible. Items which might be considered socially undesirable, such as drinking or substance use, were excluded, as were explicitly sexual behaviors, except for "love making." Some behaviors were excluded because of their ubiquity, such as eating regular meals and sleeping at night. A few behaviors that were not expected to be endorsed with great frequency were included, however, such as "mountaineering" and "writing songs." Items were generated specifically with a sample of college students in mind, though perhaps most would apply as well to the general population. Social behaviors, work, study, and athletic behaviors, games, sports, hobbies, and passtimes, and self- and home-care items were included.

Results and Discussion

Item Analysis by Sex and Sex Roles Measures

In a preliminary item analysis, items were eliminated which were endorsed by less than 10% or more than 90% of both sexes. Chi-square values were examined on the remainder for 2 x 2 tables (sex by endorsed versus non-endorsed behaviors) so that sex-related behaviors could be identified. These are shown in Table 1. Also shown for interest is a sample of items which were (approximately) equally endorsed by both sexes (Table 2). Items with the highest correlations with instrumentality, expressiveness, and AWS are displayed in Table 3.

Some items which discriminated between the sexes (see Table 1) were perhaps predictable, such as "applying makeup," "shopping (clothes)," "fixing cars," and "playing basketball," though others were not so obvious, such as "walking for exercise," "napping," "studying," "giving speeches," "gardening," or "sailing."

Factor Analysis

For the factor analyses, it was necessary to pare the items down to a manageable number. Those with a very low or very high frequency of endorsement were first eliminated, then additional items were discarded due to low communalities in preliminary factor analyses. A final set of 62 items were factored by the principal axis method using squared-multiple correlations as initial communality estimates. These were iterated to convergence, then factors were transformed by direct oblimin. Five factors were retained based on a scree test (Cattell, 1966),

though both more and fewer factors were tried and found less interpretable.

Unfortunately, there were not enough men to obtain a clear criterion for the number of factors or for interpreting tentative factor solutions which were tried by varying the number of factors. It was decided that more data were needed before developing and presenting factor results for men. Therefore, no factors for men are reported in the present study.

The items defining each factor (i.e., those with loadings greater than .35) for the women are listed in Table 4. The first factor has to do with leisure activities. Because some of the items seem particularly salient for women (based on their endorsement by sex, Table 1), this factor was labeled "Feminine Leisure Activities" (FLAct).

The second factor has to do with "Relating to Significant Others" (RSO), and was so named. Although some expressive behaviors were endorsed, it seems probable that a similar factor might be predicted for men.

The third factor was labeled "Masculine Activities" (MAct). This was interpretable as a masculine role factor, based on the sex differences for the item endorsement per Table 1. Items which loaded highest had to do with participation in team sports, "masculine home care" activities, and camping.

The fourth factor was labeled "Religiosity" (Rel), for obvious reasons. Whether or not this is a general role factor will depend upon whether or not such a factor exists for men as well.

The fifth factor was named "Home Care" (HmC). Interestingly, it contains items endorsed primarily by females, such as "washing dishes" and "vacuuming," as well as items endorsed primarily by men, such as "taking out trash" and "gardening."

Behavior Roles Scale Correlations

Behavior roles scales were computed by summing the raw scores for the items which loaded on them in Table 4. Though factors were based on just the women, the scales were computed for both sexes. Correlations among these scales are shown in Table 5, for total sample and by sex, with reliability coefficients (coefficient alpha) in the diagonal of the correlation matrix. As can be seen, these correlations range from low to moderate in size.

Table 6 shows the correlations between the role scales and sex, the PAQ sex roles variables, the AWS, and some other demographic variables: age, socio-economic level (SEL), marital status, employment status, number of children, and homemaking experience. There were four SEL values, based on parents' occupation; marital status was a dichotomous variable (single versus married), as was homemaking experience (yes or no). SEL was a three-point scale, as was employment (not employed, part-time, full-time).

For dichotomous variables such as sex, the point-biserial correlations in Table 6 are equivalent to *t*-tests with respect to significance level (Cohen, 1968). For the sex variable, women were coded as one, men were coded as two. It can be seen that

there are significant sex differences on all but the personal relationship factor, RSO. There is a slight tendency for women to be higher in religiosity than men, a stronger tendency for women to engage in home care activities more frequently, and rather strong sex differences in both FLAct (with women scoring higher), and the masculine role factor, MAct (with men scoring higher). Thus, though factors are derived from a female sample, most scales can be identified as sex-typed behavioral role patterns.

It is interesting to note the lack of correlation of certain factors with the sex roles and AWS variables when taken across both sexes. Interestingly, RSO is related to instrumentality; less surprisingly, perhaps, instrumentality is correlated with MAct. Although expressiveness is significantly related to all but religiosity, its only highly significant relationship is to FLAct.

The AWS is related very strongly to religiosity, with more traditional attitudes toward women being associated with greater religiosity, and to a slightly lesser extent, AWS is related to MAct.

For the background variables, age was negatively related to FLAct, possibly because older, returning students have jobs and families, and less leisure time. SEL was related only to AWS, and in a negative direction. Marriage and family variables (marital status, number of children, and homemaking experience) were not very much related to the sex roles variables, but as mentioned above, most participants were single. In addition,

almost none (2.3%) had children, and only a relatively small number (11.7%) had experience in homemaking. Employment status was very slightly related to MAct, with working people showing higher scores on this factor.

Correlations for the scales within each sex are also presented in Table 6. Although the patterns within each sex are similar to the overall correlations, there are some differences. In particular, the coefficients for the PAQ sex roles measures and the AWS with the behavioral role scales are somewhat lower for the women.

Conclusions

The purpose in constructing the Activities Inventory was to identify perceived behaviors that would discriminate between the sexes and to identify behavior role patterns that might be also be interpreted as sex roles, or be related to sex, or attitude toward women. The results are promising, although limited, because of the small number of men. The factors that were identified are also limited to college women, though it is possible that similar factors may be found in the general population with perhaps some differences in salient loadings.

All the factor scales except RSO were significantly related to sex, though Religiosity was not as highly correlated as others. Rel was moderately correlated with AWS and RSO was moderately correlated with instrumentality in both sexes. Based on correlations with sex, instrumentality, and expressiveness, it may be fair to state that all but Rel are in some sense sex role factors.

Additional research should focus on developing the factors for a larger group of men, and prediction of other criteria of interest to sex roles researchers. The relations of these perceived behavioral roles to self-esteem and other measures of self-concept and psychological adjustment, career choices, course of study, and marital decisions, and differences in role patterns for other populations, should be examined in the future.

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Table 1

Activities Inventory Items Which Discriminate Between the Sexes

I. Items Endorsed More Frequently by Women:

Chi-square for sex differences at $p < .001$:

applying makeup
shaving legs
watching TV (soap operas)
sending cards for special occasions
"jazzercise" or aerobic exercise
cleaning bathroom
shopping (clothes)
dieting
baking
writing letters
caring for skin
washing dishes
dusting furniture
babysitting
hugging (children)
selecting clothes to wear
planning or thinking about the future
dancing
vacuuming
home decorating
walking for exercise
kissing (children)

$p < .01$:

hugging (friends or relatives)
roller skating
sewing
studying

$p < .05$:

snacking
massaging someone
visiting relatives
kissing (friends or relatives)
buying gift for special person
singing
caring for teeth (oral hygiene)
napping
cooking

(Continued)

Table 1, Continued

Items Endorsed More Frequently by Women (Continued):

$p < .10$:

playing with children
praying
scheduling activities
talking with friends about personal problems
listening to others' problems

II. Items Endorsed More Frequently by Men:

$p < .001$:

shaving (face)
fixing cars
playing basketball
making electrical repairs
playing football
taking out trash
watching television (sporting events)
fixing appliances
lawn mowing
giving speeches

$p < .01$:

bodybuilding
playing baseball or softball
gardening
woodworking or carpentry
investing or money management

$p < .05$:

lifting or hauling heavy objects
sailing
keeping abreast of current events
playing frisbee
fishing

$p < .10$:

cleaning garage

Table 2

Items With Approximately Equal Endorsement by Sex

acting in a play	applying for a job
attending classes	attending movies
attending theatre or concerts	attending to needs of partner or mate
bathing or showering	budgeting
camping	caring for pets
dating	doing community volunteer word
driving a car	giving parties
going to the beach	hiking
hugging (partner or mate)	interviewing for jobs
jogging or running	keeping in touch with old friends
kissing (partner or mate)	listening to music on radio or stereo
meditating	painting (pictures)
playing cards or games	playing musical instruments
reading newspapers or magazines	riding a horse
skiing (snow)	swimming
taking vitamins	telling stories or jokes
typing	walking dog
washing or waxing cars	watching television (family or general audience shows)
watching television (news)	working at a job or career
writing stories or novels	

Note. - An item was included if the percentage difference in endorsement by sex was less than 5%, and the item was endorsed by at least 10% and not more than 90% or either sex.

Table 3

Items Most Highly Correlated with Sex Roles and Attitude Toward Women Measures

Scale/Item	Correlation
PAQ Instrumentality:	
dating	.27
leading or influencing others	.26
attending to needs of partner or mate	.24
keeping abreast of current events	.24
playing baseball or softball	.24
playing basketball	.24
shaving (face)	.24
attending sporting events	.23
fixing appliances	.23
making electrical repairs	.23
bodybuilding	.22
kissing (partner or mate)	.22
fixing cars	.21
fishing	.21
attending theatre or concerts	.20
camping	.20
love making	.20
playing football	.20
surfing	.20
PAQ Expressiveness:	
hugging (friends or relatives)	.27
talking with friends about personal problems	.23
baking	.21
lawn mowing	-.20
massaging someone	.20
selecting clothes to wear	.20
talking on the telephone	.20
Attitude Toward Women Scale:	
attending Church or Temple	.42
praying	.37
lawn mowing	.25
watching television (sporting events)	.24
keeping abreast of current events	-.21

Note. - Items with a correlation greater than .20 in absolute value are shown. Correlations are for combined sample of men and women.

Table 4

Items With Highest Loadings on Behavioral Role Factors

Factor/Item	Loading
Factor I: Feminine Leisure Activities (FLAct)	
going to the beach	.63
sun tanning	.59
visiting relatives	.55
talking with friends about personal matters	.53
talking on phone	.42
shopping (clothes)	.37
applying makeup	.36
skiing (snow)	.36
Factor II: Relating to Significant Other (RSO)	
hugging (partner or mate)	.90
kissing (partner or mate)	.87
attending to needs of partner or mate	.85
love making	.68
massaging someone	.56
being massaged	.54
dating	.48
Factor III: Masculine Activities (MAct)	
playing football	.72
playing basketball	.56
fixing appliances	.43
lawn mowing	.41
playing baseball or softball	.41
watching television (sporting events)	.38
camping	.35
Factor IV: Religiosity (Rel)	
praying	.78
attending Church or Temple	.74
reading Bible or religious writings	.67

(Continued)

Table 4, Continued

Factor/Item	Loading
Factor V: Home Care (HmC)	
cooking	.49
taking out trash	.49
vacuuming	.49
cleaning bathroom	.47
dusting furniture	.47
washing dishes	.46
gardening	.44
shopping (food)	.43
sewing	.40
cleaning garage	.38

Note. - All items with loadings over .35 are listed.

Table 5

Correlations Among Factor Scales

Scales	Scales				
	FLAct	RSO	MAct	Rel	HmC
I. Feminine Leisure Activities (FLact):					
Total	.70				
Women	.69				
Men	.67				
II. Relating to Sigificant Other (RSO):					
Total	.33	.86			
Women	.29	.87			
Men	.47	.67			
III. Masculine Activities (MAct):					
Total	.04	.14	.69		
Women	.14	.09	.65		
Men	.34	.38	.64		
IV. Religiosity (Rel):					
Total	.03	-.08	.08	.79	
Women	.00	-.11	.19	.79	
Men	-.10	-.03	.07	.74	
V. Home Care (HmC):					
Total	.43	.20	.23	.15	.75
Women	.35	.14	.33	.14	.77
Men	.53	.39	.41	.07	.68

Note. - Diagonals contain coefficient alpha. Two-tailed significance may be evaluated as follows:

p-level	Women (n = 191)	Men (n = 65)
.05	$r \geq .14$	$r \geq .24$
.01	$r \geq .18$	$r \geq .32$
.001	$r \geq .23$	$r \geq .38$

Table 6

Correlations of Factor Scales with Other Variables

Variables	Scales				
	FLAct	RSO	MAct	Rel	HmC
Sex	-.35	-.05	.38	-.13	-.21
Age					
Total	-.18	-.03	-.05	-.09	.06
Women	-.24	-.09	-.07	-.10	.08
Men	.05	.11	-.16	-.04	.12
Socioeconomic Level					
Total	.08	.08	-.08	-.16	-.05
Women	.17	.16	-.17	-.18	-.03
Men	.06	-.22	-.10	.02	.08
Marital Status					
Total	-.04	.11	.04	-.08	.05
Women	-.13	.15	.09	-.05	.06
Men	.16	.08	-.06	-.12	.09
Employment Status					
Total	-.04	.09	.13	.05	-.02
Women	.03	.03	.18	.05	-.06
Men	.06	.27	.09	.08	.13
Dependent Children					
Total	-.01	.05	-.02	-.03	.07
Women	-.07	.00	.02	.03	.10
Men	.18	.15	-.14	-.15	.10
Homemaking Experience					
Total	.05	-.02	.13	.12	.23
Women	-.01	-.06	.17	.13	.22
Men	.19	.15	.18	.04	.22
Instrumentality					
Total	.02	.26	.33	-.03	-.04
Women	.03	.23	.14	-.03	-.09
Men	.36	.43	.49	.11	.36
Expressiveness					
Total	.25	.13	-.14	.06	.12
Women	.16	.12	-.08	.03	.07
Men	.31	.15	-.05	.05	.16

(Continued)

Table 6 (Continued)

Variables	Scales				
	FLAct	RSO	MAct	Rel	HmC
Attitude Toward Women					
Total	.01	.03	.26	.39	.01
Women	.12	-.04	.15	.43	.09
Men	.01	.22	.31	.46	-.05

Note. - To evaluate significance, see footnote to Table 5.